

Amdt. dated October 1, 2004
Reply to Office action of July 1, 2004

Serial No. 09/457,150
Docket No. BO999009
Firm No. 0036.0036

REMARKS/ARGUMENTS

The Examiner rejected claims 1, 10, and 19 as anticipated (35 U.S.C. §102(b)) by Nakamura (U.S. Patent No. 6,075,615). Applicants traverse for the following reasons.

Claims 1, 10, and 19 concern reconfiguring multiple logical printers from using a first monitor program to using a second monitor program to communicate with one physical printer, wherein the monitor programs submit print jobs directed to a logical printer to one associated physical printer over a network, wherein at least one physical printer is capable of being associated with each logical printer, comprising: determining a plurality of logical printers; determining whether each physical printer associated with each of the plurality of logical printers is of a particular class; indicating in a data structure each logical printer associated with one physical printer of the particular class; and reconfiguring each of the plurality of logical printers indicated in the data structure to use the second monitor program to submit print jobs to one physical printer of the particular class.

The Examiner cited col. 10, lines 46-55 as disclosing the claim requirement of determining whether each physical printer associated with each of the plurality of logical printers is of a particular class. (Office Action, pg. 3) Applicants traverse.

The cited col. 10 mentions that print engines are grouped into physical engines of similar characteristics, and the physical engines can be configured as one virtual engine. Although the cited col. 10 discusses how physical print engines of a type can be configured as one virtual engine, nowhere does the cited col. 10 anywhere disclose the claim requirement of determining whether each physical printer associated with each of the plurality of logical printers is of a particular class. Although in the cited col. 10 physical engines are grouped with a virtual engine, nowhere does the cited col. 10 anywhere disclose that a determination is made of each physical printer associated with each logical printer of a particular class. In fact, the cited Barry may not have a need for this claimed determination operation because the cited Barry's physical printer engines are associated with a virtual engine based on a similar characteristic.

The Examiner cited col. 14, lines 14-30, FIG. 12 of Barry as disclosing the claim requirement of indicating in a data structure each logical printer associated with one physical printer of the particular class. (Office Action, pg. 3) Applicants traverse.

Amdt. dated October 1, 2004
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Serial No. 09/457,150
Docket No. BO999009
Firm No. 0036.0036

The cited col. 14 discusses how a job may be divided into multiple jobs so that the jobs can be sent to different virtual engines, such as a color and black and white virtual engines. Each of the virtual engines are combination of multiple engines. Table 4 describes how jobs are routed to different engines associated with the virtual engine.

Although the cited Barry discusses maintaining information on multiple engines associated with each virtual engine, there is no disclosure or mention in the cited Barry of indicating in the data structure each logical printer associated with physical printers of a particular class. Instead, the cited Barry discusses how multiple printer engines are associated with a virtual engine.

The Examiner col. 17, lines 60-67 and col. 18, lines 1-7 as disclosing the claim requirement of reconfiguring each of the plurality of logical printers indicated in the data structure to use the second monitor program to submit print jobs to one physical printer of the particular class. (Office Action, pg. 3). Applicants traverse.

The cited cols. 17-18 discuss how a RIP, raster processor, is connected to the printer via a PCI interface that allows two engines to connect to the PC bus to handle 100s of compressed pages a minute. A job parser splits virtual print engines across multiple print stations, and provides diagnostic feedback and status.

Nowhere does the cited cols. 17-18 anywhere disclose or mention reconfiguring logical printers indicated in the data structure from using a first monitor program to using a second monitor programs to submit jobs to the physical printers of the particular class. Instead the cited Barry discusses the PCI interface to interface a PC to multiple print engines and splitting a job among virtual print engines associated with physical printers. There is no disclosure in the cited Barry of reconfiguring a plurality of logical printers indicated in the data structure to use a different monitor program to submit print jobs. For instance, nowhere does the cited Barry anywhere disclose or mention how to reconfigure the program its virtual engines use to submit print jobs.

Accordingly, claims 1, 10, and 19 are patentable over the cited because the cited Nakamura does not disclose all the claim requirements.

Amdt. dated October 1, 2004
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Serial No. 09/457,150
Docket No. BO999009
Firm No. 0036.0036

The Examiner rejected claims 2-9, 11-18, and 20-27 as obvious (35 U.S.C. §103) over Barry in view of Stollfus (U.S. Patent No. 6,321,258). Applicants traverse for the following reasons.

First off, claims 2-9, 11-18, and 20-27 are patentable over the cited art because they depend from one of claims 1, 10, and 19, which are patentable over the cited art for the reasons discussed above. Moreover, the following dependent claims provide additional grounds of patentability over the cited art.

Claims 3, 12, and 21 depend from claims 1, 10, and 19 and further require that a port object provides an interface to a physical printer, wherein each logical printer is associated with one port object to interface with one physical printer, wherein the port monitor is associated with the port object, and wherein reconfiguring each of the plurality of logical printers to use the second monitor program comprises setting the logical printer to use one port object associated with the second port monitor to submit print jobs.

The Examiner cited col. 21, lines 4-14 of Barry as disclosing the additional requirements of these claims. (Office Action, pg. 4) Applicants traverse for the following reasons.

The cited col. 21 discusses kernel mode device objects for each printer port. A PPE (software physical print engine) object then communicates with the associated physical print engine through the kernel mode device engine and kernel mode device object.

Although the cited col. 21 discuss how a kernel mode device object is created for each printer port and used to communicate with the port, nowhere does the cited Barry disclose the claim requirement of reconfiguring each of the plurality of logical printers to use the second monitor program by setting the logical printer to use one port object associated with the second port monitor to submit print jobs. Nowhere in the cited Barry is there any mention of reconfiguring logical printers to use port objects associated with a new, i.e., second, port monitor program to submit print jobs. Instead, the cited Barry discusses how a kernel mode device object is created and used to communicate with a physical print engine.

Accordingly, claims 3, 12, and 21 provide additional grounds of patentability over the cited art because the cited art does not teach or suggest the additional requirements of these claims.

Amdt. dated October 1, 2004
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Serial No. 09/457,150
Docket No. BO999009
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Claims 4, 13, and 22 depend from claims 3, 12, and 21 and further require determining a network address of each physical printer by processing a name of one port object associated with the first monitor program providing the connection between the physical printer and associated logical printer, wherein determining whether each physical printer is of a particular class comprises using the determined network address of each physical printer to request information from the physical printer over the network, wherein the requested information indicates whether the physical printer is a member of the particular class.

The Examiner cited col. 8, lines 37-44 of Stollfus as teaching the additional requirements of these claims. (Office Action, pgs. 4-5) Applicants traverse for the following reasons.

The cited col. 8 mentions how an administrator can discover the identity, make and model of resources coupled to a network through discovery.

Although the cited Stollfus discusses how to discover information on devices in the network, nowhere does the cited Stollfus anywhere teach or suggest using information on the printer to determine whether a printer is of a particular class for the purpose of reconfiguring the logical printer from using a first monitor program to using a second monitor program to submit print jobs to the printers.

Accordingly, claims 4, 13, and 22 provide additional grounds of patentability over the cited art because the cited art does not teach or suggest the additional requirements of these claims.

Claims 6, 15, and 24 depend from claims 3, 12, and 21 and further require that reconfiguring the plurality of logical printers comprises: creating a new port associated with the second monitor program for each logical printer; and reconfiguring each of the logical printers indicated in the data structure to use the new port for printing. The Examiner cited col. 21, lines 4-14 of Barry as disclosing the additional requirements of these claims. (Office Action, pg. 5) Applicants traverse.

The cited col. 21 discusses kernel mode device objects for each printer port. A PPE (software physical print engine) object then communicates with the associated physical print engine through the kernel mode device engine and kernel mode device object.

Although the cited col. 21 discuss how a kernel mode device object is created for each printer port and used to communicate with the port, nowhere does the cited col. 21 anywhere

Amdt. dated October 1, 2004
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Serial No. 09/457,150
Docket No. BO999009
Firm No. 0036.0036

disclose the claim requirement of creating a port associated with a second monitor program that is different than the first monitor program associated with the port that the logical printer is currently using, and then reconfiguring logical printers to use the new port and new second monitor program. In other words, the cited col. 21 nowhere discloses how to reconfigure a logical printer from using a first monitor program to using a second monitor program by associating the logical printer to use the new port associated with the second monitor program. Instead, the cited col. 21 discusses how a kernel mode device object is created to use for communication with a physical print engine.

Accordingly, claims 6, 15, and 24 provide additional grounds of patentability over the cited art because the cited art does not teach or suggest the additional requirements of these claims.

Claims 8, 17, and 26 depend from claims 7, 16, and 25 and further require that a separate thread is initiated to perform the operations of setting the logical printers to use the new ports as indicated in the data structure. The Examiner cited col. 21, lines 4-14 as disclosing the additional requirements of these claims. (Office Action, pgs. 6) Applicants traverse.

As discussed, the cited col. 21 discusses kernel mode device objects for each printer port. A PPE (software physical print engine) object then communicates with the associated physical print engine through the kernel mode device engine and kernel mode device object. Nowhere does the cited col. 21 disclose initiating a separate thread to perform the operations of setting logical printers to use a new port to reconfigure the logical printer from using a first monitor program to using a second monitor program. Nowhere does the cited Barry anywhere disclose initiating a separate thread for this claimed purpose.

Accordingly, claims 8, 17, and 26 provide additional grounds of patentability over the cited art because the cited art does not teach or suggest the additional requirements of these claims.

Claims 9, 18, and 27 depend from claims 6, 15, and 24 and further require determining ports associated with each logical printer that are replaced by the new port and deleting, for each logical printer, all the determined ports. The Examiner cited col. 21, lines 4-14, col. 5, lines 47-67, and col. 6, lines 1-11 of Barry as teaching the requirements of these claims. (Office Action, pg. 6) Applicants traverse for the following reasons.

Amdt. dated October 1, 2004
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Serial No. 09/457,150
Docket No. BO999009
Firm No. 0036.0036

The cited col. 21 discusses kernel mode device objects for each printer port. A PPE (software physical print engine) object then communicates with the associated physical print engine through the kernel mode device engine and kernel mode device object. Nowhere does the cited col. 21 anywhere disclose determining ports associated with logical printers replaced by new ports associated with a different monitor program, and then deleting all the determined ports. Nowhere does the cited col. 21 anywhere teach, suggest or mention replacing parameters to reconfigure the logical printer from using a first monitor program to using a second monitor program as claimed.

The cited col. 5 discusses configurations for the transfer of data between an input and print engine. Col. 5 discusses the print operations and the transferring of the data to the print engine, and the time to perform these operations. The cited col. 6 discusses a system having a processor for assembling a print job and transferring the print job to a print engine having an internal RIP, raster processor. Nowhere do the cited cols. 5-6 anywhere disclose determining ports associated with logical printers replaced by new ports associated with a different monitor program, and then deleting all the determined ports. Nowhere do the cited cols. 5-6 anywhere teach, suggest or mention replacing parameters to reconfigure the logical printer from using a first monitor program to using a second monitor program as claimed.

Accordingly, claims 9, 18, and 27 provide additional grounds of patentability over the cited art because the cited art does not teach or suggest the additional requirements of these claims.

Conclusion

For all the above reasons, Applicant submits that the pending claims 1-27 are patentable over the art of record. Applicants have not added any claims. Nonetheless, should any additional fees be required, please charge Deposit Account No. 50-0563.

Amdt. dated October 1, 2004
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Serial No. 09/457,150
Docket No. BO999009
Firm No. 0036.0036

The attorney of record invites the Examiner to contact him at (310) 553-7977 if the Examiner believes such contact would advance the prosecution of the case.

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